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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

CHO, HONG SOL

ART UNIT PAPER NUMBER

2662

DATE MAILED: 08/20/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/788,259

Applicant(s)

TIEDEMANN ET AL.

Examiner

Hong Cho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 22-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 12-21 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11 and 22-30, drawn to signaling for transmit power and data rate, classified in class 370, subclass 311.
 - II. Claims 12-21, drawn to retransmission in flow control, classified in class 370, subclass 236.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different invention I (claims 1-11 and 22-30) is directed to a system and method of controlling the level of transmit power in a reverse supplemental channel in a wireless communications, while invention II (claims 12-21) to a technique of retransmission of data when the data are detected loss, thereby providing data transmission reliability. In view of above, they have different modes of operation, different functions, and/or different effects.
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Hossain Beladi on 8/11 a provisional election was made with traverse to prosecute the invention of group I, claims 1-11 and 22-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

7. Claim 28 is objected to because of the following informalities: Claim 28 is dependent on itself. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 26, the phrase "adjusted by a larger step" renders the claim indefinite. It is described in claim 22 that the first power control stream is used to control power level of the supplemental channel and the second power control stream is used to control transmit characteristic of the supplemental channel. It is not clear how transmit power can be adjusted with respect to each other.

See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-3, 7-11, 22-25, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al (U.S. 6757270), hereinafter referred to as Kumar, in view of Chung et al (U.S. 6741862), hereinafter referred to as Chung.

Re claims 1-3, 9, and 22, Kumar discloses a channel structure of reverse link of a wireless communication system with a fundamental channel handling both signaling and data transmission (*transmit data and signaling*, column 2, lines 6-

7), a supplemental channel handling data transmission (*transmit packet data*, column 2, lines 16-17), a control channel handling signaling on the reverse link (*transmit signaling*, column 2, lines 19-22), and a forward power control channel controlling the reverse-link power for a different mobile station (*transmit power streams for the reverse link for a particular remote terminal*, column 17, lines 56-61). Kumar discloses a forward power control channel controlling the reverse-link power of the reverse supplemental channel with respect to other reverse-link channels such as reverse control and traffic channels by periodically sending repeated power control bit to the mobile station (*transmit the first power control stream to control the transmit power of the reverse supplemental channel relative to that of a designated reverse-link channel*, column 17, lines 56-61). Kumar fails to disclose transmitting second power control packet to control a transmit characteristics of the reverse supplemental channel. However, Chung discloses puncturing (multiplexing) reverse power control bits to change the reverse data rate of reverse link channel (*control a transmit characteristics such as data rate of the reverse link*, column 11, lines 53-56).

In view of this, having the teaching of Chung and the system of Kumar, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace one or more reverse power control bits with the rate control bit. The motivation to combine is to get the benefit of enhanced reverse-link rate throughput and reduced reverse-link interference by controlling reverse-link data rates of supplemental channels of mobile stations.

Re claims 10, 11, 27 and 28, Chung discloses sending reverse power control bits to each mobile station periodically to control data rate of reverse supplemental channels (*control transmit power or data rate of the group of remote terminals; enable and disable transmissions on reverse supplemental channels*, column 11, lines 45-47).

Re claim 7, Kumar discloses establishing and maintaining supplemental channel by sending supplemental channel assignment message (SCAM) to inform the mobile of the supplemental channel assignment (*assign and de-assign supplemental channel by signaling transmitted by the reverse control channel*, column 15, lines -5).

Re claim 8, Kumar discloses receiving a message indicating that a mobile unit has the reverse-link data to transmit (*a reverse rate indicator channel transmitting information related to data transmission on the reverse link*, column 22, lines 42-45).

Re claim 23, Kumar discloses controlling the reverse-link power of the reverse supplemental channel with respect to other reverse-link channels such as reverse control and traffic channels by periodically sending repeated power control bit to the mobile station (*receive power control stream to control the transmit power of the reverse supplemental channel relative to that of a designated reverse-link channel*, column 17, lines 56-61).

Re claims 24 and 25, Chung discloses sending the frame with reverse power control bits to each mobile station periodically to control data rate of reverse

supplemental channels (*control data rate or enable and disable transmission of supplemental channel*, column 11, lines 45-47).

Re claim 29, Kumar and Chung fail to disclose explicitly a transmit data processor, a receive data processor, and a controller coupled to transmit and receive data processors performing the process mentioned in claim 1. However, Kumar's modified system with Chung as explained in the rejection of claim 1 inherently includes processors for transmitting data and signaling on reverse data channels and for receiving power control streams from a power control channel and a controller adjusting power level and data rate of a reverse supplemental channel.

12. Claims 4-6 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al (U.S. 6757270), hereinafter referred to as Kumar, in view of Chung et al (U.S. 6741862), hereinafter referred to as Chung, and in further view of Sen et al (U.S. 6208620), hereinafter referred to as Sen.

Re claim 4 and 30, Kumar and Chung fail to disclose a forward channel transmitting a signaling packet indicating if the receiver has received a packet. However, Sen discloses TCP-Aware Agent Sublayer (TAS) mechanism, coupled to a traffic channel, informing the transmitter about frames the receiver has not received (*a forward acknowledgement channel to transmit signaling indicative of received status of the packet*, column 11, lines 23-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement system of Sen to Kumar and Chung's system

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to get the benefit of enhanced packet transmission performance over wireless network by using TCP transmission control scheme (column 3, lines 39-42).

Re claims 5 and 6, Sen discloses transmitting ACK packets during forward transmission (*transmit an ACK on the forward acknowledgement channel*, column 11, lines 26-30).

Allowable Subject Matter

13. Claim 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent (6724740) to Choi et al discloses channel communication device and method for CDMA communication system.
- US Patent (5621723) to Walton, Jr. et al discloses power control in a CDMA network.
- US Patent (6434367) to Kumar et al discloses using decoupled power control sub-channel to control reverse-link channel power.


15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 703-305-0343.

The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hong Cho
Patent Examiner
8-11-2004


RICKY NGO
PRIMARY EXAMINER